

# DETERMINANTS FOR FINANCING IT FIRMS: A STUDY OF INDIAN INVESTORS

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**Abstract:** The present work is based on survey dataset of 104 investors who invests in various sector of the Indian economy along with IT sector in order to understand the selection process and evaluation criteria of investors towards IT sector in Indian context and to analyze the different dimensions of venture capitalists management and other investors based on risk return aspects, choice of investment firm, expected return on investment and financing mix. Our study gathered importance of selection factor and economic aspects of VCs in the selection process of IT firms and analyze the various other aspects of proposed investment. A designed questionnaire was sent to all investors who are the part of investment process. Factor Analysis and ANOVA has been used to obtain the results.

**Keywords:** Investment, IT Sector, Selection Process

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## 1. Introduction

The growth and development of any sector largely depends on the fulfillment of funding requirement and availability of funding sources. In order to achieve the targeted future goals, it is important to continue with regular flow of capital in to the business concern. Initial and regular investment not only provide financial support but also helps to face the increasing completion, within the economic boundary and worldwide as well.

Availability of financial resources has been considered as an important aspect for continual growth and development. It has also been observed that availability of such funding resources is critical in most of the expansion activity. Different firms face various funding issues from different sources of funding agencies. In the spectrum of innovating source of finance, among the other mode of investment, venture capital is also emerging as an important innovating financial source for various sector of the economy.

Venture capital can be defined as a process through which the new highly risky startups are financial supported by investors in the overall development of business concern, in order to attract market opportunities and in obtaining long term capital gains (Shilson, 1984). Venture Capital, has been defined as a dedicated pools of capital which is independently managed and primarily has the interest in privately held, high-growth companies through investments in their equity, or equity-linked financial instruments (Lerner, 2009), and it also performs an important role in the commercial transformation of R&D activities and is therefore proven catalyst for innovation (Christofidis and Debande, 2001). The founding editor and also an influential UK Venture capitalist of The Venture Capital Report (Reid, 1998) has further added: "venture capital is invested in high-risk venture (typically new companies and new technologies)".

## 2. Literature Review

It is to be noted that the process of designing of business plan, its submission for investment purpose, review

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and selection has been considered as one of the important aspect of investment decision. Most of the business plans are rejected by the investors because of multiple factors which investor demand in the proposed business plans. During the period of 1974 to 2016 number of studies have concluded in their research work that selection factors, investment objectives, investment dimensions and investment process are integral part of any investment decision making process. The present work is the mirror image of previous work who investigated the selection criteria, investment motives, significance of factors based on firm's structure and other dimensions of investment process.

In the selection process of business proposal, preference for evaluation process (Barry, 1994; Fried & Hisrich, 1994), experience and personality of the entrepreneur, ownership and uniqueness of a product or service [Wells (1974), MacMillan et al. (1985), Ray (1991), Ray & Turpin (1993), Ramón et al. (2007) where as MacMillan et al. (1985) and Muzyka et al. (1996) Fried & Hisrich (1994) and Tyebjee & Bruno (1984)], significance of market growth and its link to competitive advantage [Poindexter (1976) and Pandey & Jang (1996)] and return on investment was given more importance. Shepherd (1999) highlighted that industrial experience has high importance. Shepherd (1999) determined the importance of factors which lead to success or failure with the venture and gathered various aspects such as managerial skills, product branding and market awareness. Lerner (2004), by reviewing all criteria gathered in previous studies focused on flexibility of business conditions so that venture can adjust in any adverse condition and could gain possible profitable opportunities. Worrall (2008) in his study emphasized on due-diligence as an important factor in order to complete valuation process of a company. Chen et al. (2009) in his study given strong preference to creation and submission of business plan and determined two major factors, business plan and project planning. Geronikolaou and Papachristou (2012) in his study obtained the significant relationship among VC investment and its relationship with patent. Faria and Barbosa (2014) investigated investment stage as one of the significant factor of investment proposal and also linked it to growth aspect of a business concern. Dutta and Folta (2016) described the relationship between business angles, venture capitalist and patent applications.

### **3. Objectives of the Paper**

- To understand the importance of different dimensions of VC management team related with investment decision.
- To obtain the key selection and key investment criteria based on two major aspects: Entrepreneurs dimension and investment dimension
- To check the pattern and relationship among choice of factor and importance of factors.

### **4. Research Methodology**

#### **4.1 "Data"**

The present study is exploratory and descriptive in nature. Primary and secondary sources have been used for study. Primary data is collected through a structured questionnaire, created with the help of identified factors resulted in previous empirical studies and was sent to various investors located in various metro cities of India. Secondary data is collected from various published literature, Journals, news papers and research articles.

#### **4.2 Analysis Tool**

For obtaining the different dimensions of investors in the selection process of IT firms in Indian context, gathering the factors affecting selection process and determining the investment motives, factor analysis has been used and to prove the relationship among choice of factors and its internal relationship, ANOVA has been used.

## 5. Results

We have obtained the results on two major outcomes of the study. Firstly aspects of selection process and risk-return factors related with investment decisions and relationship between choice of factors have been identified and second analytical study based on different dimension related with investment decision have been obtained.

### 5.1 Results obtained through Factor Analysis

To assess the importance of funding decision and investment process, we used factor analysis to reduce the variables. For understanding the evaluation criteria, total 32 variables were taken into considerations which were reduced in to 16 variables, grouped under four dimensions and for the determination of investment motives, total 42 variables were taken into consideration and were reduced in to 28 variables using factor analysis. Factor analysis has been used to obtain the number of variables. Factors have been extracted through principal analysis and rotated by means of Varimax, with Kaiser Normalization. The representation of the outcome of rotation process has been given as an appendix in Annexure 1 and Annexure 2. The formation of dimensions and creation of groups are given below in Table 3 and Table 4

Table 1 Factors affecting evaluation criteria

	FACTORS			
	1	2	3	4
	Entrepreneur Skills pertaining to market research	Risk –Return and investment strategies	Branding and existence of the product	Track Record
Variables	Demonstrated leadership ability	Capable of sustained intense effort	Personal compatibility to me, Wells.	Track record relevant to venture.
	Demonstrated managerial capabilities in general business.	Ability of evaluation and reaction to risk.	Entrepreneur referred by trustworthy source.	
	Market has significant growth rate.	Venture provides exit strategies.	Product has been developed to prototype.	
	Familiarity with industry.	Required return of 10 times investment.	Product has raw material availability.	
	Resistance to economic cycles.	Required liquidity and taken public.	Venture will stimulate existing market.	

Table 2 Investment Motives

	Factors			
	Social and Economical Development	Financial Motives	Investment appraisal and evaluation	Product Branding
Variables ⇒	Target an ownership position in investee firm	Own return	Discounted value of free cash flows	Investor return
	Growth and regional development	Experienced Forecast of the likely future value of the firm	Risk of losing entire investment	Promoting entrepreneurs
	Tax incentives	Capitalized maintainable earnings (P/E multiple	Risk of unsuccessful implementation of the idea	Capable of high profit margin
	Fixed compensation,	Capitalized maintainable earnings (P/E multiple – historic basis)	IT sector as a growing sector	
	Market capitalization	Future plans		
	Latest transaction prices for acquisition in the sector			
	Capitalized maintainable earnings (EBIT multiple)			
	Industry's special rule of thumb pricing ratio (e.g. turnover ratios)			
	Present value of future cash flows			
	Risk of being unable to bail out, if necessary			
	Competitive risk			
	leadership failure			
	Market potentiality and links			
	Resources and capabilities			
	Risk taking capacity			
	Leadership style			

## 5.2 Results obtained through ANOVA

Analysis of Variance is a technique to understand the relationship among the variables. In the present work, we used five point likert scale for obtaining the responses from investment firms. We observed the different investors have different opinions in their preference about the selection and evaluation criteria in the process of acceptance of an investment proposal. This difference is due to different aspects which are based on investment motives of investors. With the help of ANOVA, we proved the relationship among investor's investment motives, selection of aspects, identification of right business proposal and assignment of weights to all factor. Through ANOVA we obtained that different investors have their common preference in selection of different factors of investment motives, selection process, evaluation criteria, accepting or rejecting business proposal, deciding risk return aspects and creating funds for proposed investment decision. All investors have

same opinion for investment motives but there are certain differences in terms of providing the range of selection and weights while selecting each factor. It has also been proved that selection of factors seem to be an important objectives in creation of business plan by IT firms in order to get their proposal funded by VCs. Results obtained by applying ANOVA has been given in the appendix.

### 5.3 Analytical Results for Different Investment Motives

Next we have also analyzed the other dimensions of VC management team to understand their preference about proposed investment sources, expected rate of return, compensation motive and financing mix.

#### 5.3.1 Preference in Investment source:

In order to obtain the information about the preferred investment source, our survey collects the data considering 5 sectors of Indian economy such Information Technology sector, pharmaceutical sector, telecommunication sector, hospitality sector and infrastructure sector. The survey reported that 30% investors have their preferences in choosing information technology sector as investment destination, 14% prefer pharmaceutical sector, 9% have their choice in telecommunication sector, 29 % want to select hospitality sector and 18% have their preference in choosing infrastructure sector.

#### 5.3.2 Expected Average Rate of Return on Investment

To understand the pattern and choice of investment desired by investors, our survey analyzes the data considering 5 different ranges of investment return. The survey reported that 40% investors have their preferences in getting 10%-20% returns, 35% look for 5%-10%, 7% have their choice in generating 30% returns and 18% want to 20%-30% returns.

#### 5.3.3 Compensation Management

To obtain the desire about the needed compensation by investors, our survey reported that 48% investors have their preferences in getting good returns on investment, 24% investors are interest in receiving management fee, 17% look for growth in proposed value of investment and 11% proceed for equity stake.

#### 5.3.4 Financing Mix for Proposed Fund Requirement

Total 6 instruments have been used for this purpose such as equity capital, convertible debt, shareholder's contribution, loans with separable option, preferred stock and participating loan. Out of our respondents, 19% prefer to raise funds from equity capital, 19% from convertible debt, and 12% from shareholder's contribution, 22% from loans with separable option, 23% from preferred stock and 5% from participating loan.

#### 5.3.5 Strategies for Exit Plans

To understand the decisions about the strategies towards exit plan from investment destination, our survey determined that of various options such as Initial public offer, buy back, trade sale and structural change in investment, 20% investors are interest for initial public offer, 46% have their choices in acquisition or trade sale, 14% look for secondary sale, 11% want to go for buyback and 9% investors are interested for reconstruction of investment.

#### 5.3.6 Stage wise choice of investment

In order to understand the investment choice of investors during selection of preferred stage of investment, our study obtained that out of all stages of venture capital investment proves, 30% have their preferences in selecting seed stage for investment purpose, 17% look for startup stage, 17% choose expansion stage, 19% have their preferences for replacement stage and 17% target exit stage for their investment preferences.

## 6 Conclusions

The present work determines the investment motives and evaluation criteria of VCs and other investors in order to select IT firms in Indian context and analyzes their risk return and investment dimensions related with proposed investment. Our results gathered that choice of factors among different investors remains same and selection of aspects to individual firms differ. We find that entrepreneurs capability, designing of business plan, risk return relationship, market research, branding of product, acceptability of the product and track record of the firm plays very important role in the evaluation process of firms and investors give due care to all factors during their screening process.

Factor analysis resulted with most important investment motives and evaluation criteria and ANOVA resulted with a relationship between choice of aspects and their impact on assignment of weights.

The results will have a positive impact in the designing of business plans by IT firms in order to attract more investment by traditional and modern sources of investment and will also help investors to understand the firm's qualitative aspects in a prescribed manner.

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**Appendix**

**Appendix 1: Factor Loading for Evaluation Criteria**

Factor Loadings of Variables in Four Dimensions				
Variables	Factors			
	1	2	3	4
Leadership skills	.934			
Managerial skill related with the business	.962			
Productive growth rate	.935			
Industry exposure	.962			
Economic conditions and adoptability	.934			
Efforts for generating returns from market		.755		
Risk – return analysis and its evaluation		.986		
Planning for exit opportunities		.986		
10 times return from proposed investment		.780		
Liquidity profitability trade off and taken public		.986		
Compatibility features with investors			.869	
Entrepreneur reference source			.939	
Preface to product development			.913	
Raw material conditions			.939	
To gain market opportunities			.913	
Ventures track record				.921

*Source: Extraction Method: Principal Component Analysis.*

*Rotation Method: Varimax with Kaiser Normalization.*

**Appendix 2: Factor Loading for Investment Motives**



Factor Loadings of Variables in Four Dimensions

Variables	Factors			
	1	2	3	4
Desire of ownership position	0.756			
Positive growth and development on regional basis	0.818			
Tax implication and incentives	0.972			
Investment returns	0.844			
Market capitalization rate	0.880			
Acquisition and its transaction price	0.844			
Earnings before interest and tax	0.818			
Analysis or turnover ratio	0.880			
Predictive cash flow	0.928			
Risk of being unable to bail out	0.772			
Risk of intense competition	0.880			
Risk of leadership failure	0.764			
Market awareness	0.818			
Available resources	0.899			
Risk bearing capacity	0.972			
Leadership traits	0.972			
Internal returns		0.985		
Evaluation of future value of the firm		0.966		
Price- earnings ratio		0.985		
Evaluation of Capitalized maintainable earnings		0.985		
Planning directions for future		0.911		
Discounted value of future cash flow, free or tax based			0.988	
Risk of investment lost			0.988	
Risk of idea implementation			0.988	
Growing capacity of IT sector			0.988	
Investor return				0.986
Promotional factors of entrepreneurs				0.986
Evaluation of profit margin				0.903

*Extraction Method: Principal Component Analysis.*

*Rotation Method: Varimax with Kaiser Normalization.*

**Appendix 3 RESULTS OF ANOVA**

ANOVAs: Two-Factor Without Replication
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<u>Summary</u>	<u>Count</u>	<u>Sum</u>	<u>Average</u>	<u>Variance</u>		
F1	8	35.12	4.39	0.010628571		
F2	8	32.34	4.0425	0.007364286		
F3	8	33.98	4.2475	0.001135714		
F4	8	36.3	4.5375	0.008392857		
Financers	4	17.26	4.315	0.0233		
Financial Consultants	4	17.28	4.32	0.109333333		
Financial Institutions	4	17.38	4.345	0.027833333		
Fund Managers	4	17.28	4.32	0.060266667		
Private Banks	4	17.12	4.28	0.055466667		
Public Banks	4	17.14	4.285	0.081166667		
VCs	4	17.1	4.275	0.013966667		
Others	4	17.18	4.295	0.0433		
<u>ANOVA</u>						
<u>Source of Variation</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>P-value</u>	<u>F crit</u>
Rows	1.0679375	3	0.355979167	42.48383889	4.26E-09	3.072467
Columns	0.0166875	7	0.002383929	0.284506642	0.952887	2.487578
Error	0.1759625	21	0.008379167			
Total	1.2605875	31				

Appendix 4 RESULTS OF ANOVA

ANOVAs: Two-Factor Without Replication						
<u>Summary</u>	<u>Count</u>	<u>Sum</u>	<u>Average</u>	<u>Variance</u>		
F 1	7	28.6063	4.08661	0.00507		
F 2	7	29.94	4.27714	0.02259		
F 3	7	28	4	0		
F 4	7	33.5	4.78571	0.01032		
Financial Consultant	4	16.675	4.16875	0.08391		
Financial Institution	4	17.3058	4.32646	0.1368		
Fund Manager	4	17.2488	4.31219	0.09101		
Private Bank	4	16.9838	4.24594	0.19694		
Public Bank	4	17.1688	4.29219	0.13108		
VC	4	17.3058	4.32646	0.1368		
OTHERS	4	17.3583	4.33958	0.13627		
ANOVA						

<i>Source of Variation</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Rows	2.599372	3	0.866457	112.1727	7.72E-12	3.159908
Columns	0.088834	6	0.014806	1.91676	0.133009	2.661305
Error	0.139038	18	0.007724			
Total	2.827244	27				